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Indian Standard
SPECIFICATION FOR
DOUBLE FLANGED BOBBINS USED IN
WOOLLEN AND WORSTED MILLS

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SPECIFICATION FOR DOUBLE FLANGED BOBBINS USED IN WOOLLEN AND WORSTED MILLS

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Indian Standard

SPECIFICATION FOR DOUBLE FLANGED BOBBINS USED IN WOOLLEN AND WORSTED MILLS

0. FOREWORD

0.1 This Indian Standard was adopted by the Indian Standards Institution on 29 December 1969, after the draft finalized by the Textile Mill Accessories (Other Than Jute) Sectional Committee had been approved by the Textile Division Council.

0.2 Double-flanged bobbins are used on various machines, such as draw frames, gill pin boxes, fly frames, cop spinning and dolly doubling frames, in woollen and worsted mills.

0.2.1 These bobbins generally consist of a top flange, a shank and bottom flange. The flanges are generally made of solid wood, laminated wood, vulcanized fibre or ply combination of vulcanized fibre and plastics and shank of good quality timber.

0.3 Since the dimensions and shape of double-flanged bobbins used in woollen and worsted mills vary to a great extent depending on the machine in conjunction with which they are to be used, this standard prescribes only the permissible tolerances on various dimensions.

0.4 This standard is based on the manufacturing practices followed in the country in this field.

0.5 This standard contains clauses 2.1 to 2.3, 3.1, 3.2, 3.3.1, 3.4 and 5.3 which call for agreement between the buyer and the seller permitting the buyer to use his option for selection to suit his requirements.

0.6 For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS : 2-1960*. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

*Rules for rounding off numerical values (revised).

1. SCOPE

1.1 This standard prescribes the requirements for double-flanged bobbins for use on various machines in woollen and worsted mills.

2. MANUFACTURE

2.1 Material — The shank and flanges of the bobbin shall be made of the material as agreed to between the buyer and the seller. The wooden flanges may be reinforced, if specified by the buyer, with tin plate having a minimum thickness of 0·315 mm or any other metal sheet of thickness as agreed between the buyer and the seller subject to a tolerance of $\pm 0\cdot03$ mm. Timber, wherever, used in the manufacture of shanks or flanges, shall be of good quality and fully seasoned (*see IS : 1141-1973**).

2.2 Workmanship — The flanges shall be well-secured to the shank of the bobbin by screwing with resin and then pegging. The bottom flange shall be provided with a groove to accommodate the driving unit of the spindle as prescribed by the buyer.

2.3 Smoothness of Surface — The bobbin shall be finished smooth and varnished or enamelled as prescribed by the buyer.

2.4 Freedom from Defects — The bobbin shall be free from any visual defect which is likely to affect its life or usefulness. For description of various types of defects of timber, *see IS : 707-1968†*.

3. REQUIREMENTS

3.1 Type — The bobbin shall be of the type as required by the buyer for use on a particular machine.

3.2 Dimensions — The dimensions of the bobbin shall be as prescribed by the buyer depending on the machine. The tolerances on the various dimensions shall, however, be as follows:

Dimension	Tolerance
	mm
Overall length	± 2
Distance between flanges	± 1
Diameter of flanges	± 1
Diameter of shank	± 1
Inside bore diameter	+ 0·5
Thickness of flanges	$\pm 0\cdot5$

*Code of practice for seasoning of timber (*first revision*).

†Glossary of terms applicable to timber and timber products (*first revision*).

3.3 Concentricity — Flanges of the bobbin shall be concentric with the bore of the shank.

3.3.1 The eccentricity of the bobbin both at top and bottom flanges when measured on a Whitin Bobbin Tester or any other suitable apparatus as agreed to between the buyer and the seller shall not be more than 0·5 mm.

3.4 Weight — The average weight of a bobbin in a lot shall be as agreed to between the buyer and the seller.

3.4.1 A tolerance of \pm 4 percent on the agreed weight of the bobbin shall, however, be permissible.

4. MARKING

4.1 Each bobbin shall be marked with the brand or trade-mark of the manufacturer.

4.1.1 The bobbins may also be marked with the ISI Certification Mark.

NOTE — The use of the ISI Certification Mark is governed by the provisions of the Indian Standards Institution (Certification Marks) Act and Rules and Regulations made thereunder. The ISI Mark on products covered by an Indian Standard conveys the assurance that they have been produced to comply with the requirements of that standard under a well-defined system of inspection, testing and quality control which is devised and supervised by ISI and operated by the producer. ISI marked products are also continuously checked by ISI for conformity to that standard as a further safeguard. Details of conditions under which a licence for the use of the ISI Certification Mark may be granted to manufacturers or processors, may be obtained from the Indian Standards Institution.

5. SAMPLING

5.1 Lot — All the bobbins of the same type and manufactured from the same material under essentially similar conditions supplied to one buyer against one despatch note shall constitute a lot.

5.2 The conformity of a lot to the requirements of this standard shall be determined on the basis of the tests carried out on the samples selected from it.

5.3 Unless otherwise agreed to between the buyer and the seller, the samples shall be selected as prescribed in 5.4 and 5.5.

5.4 The number of packages to be selected from a lot shall depend on the size of the lot and shall be in accordance with col 1 and 2 of Table 1. The packages so selected shall constitute the gross sample.

**TABLE 1 SAMPLE SIZE AND PERMISSIBLE NUMBER OF
NON-CONFORMING BOBBINS**

(*Clauses 5.4 and 5.5*)

NO. OF PACK- AGES IN THE LOT	NO. OF PACK- AGES TO BE SELECTED (GROSS SAM- PLE)	NO. OF BOB- BINS TO BE SELECTED FOR TESTING DIMENSIONS AND CONCEN- TRICITY	PERMISSIBLE NO. OF NON- CONFORMING BOBBINS AM- ONGST THOSE SELECTED AS IN Col 3	NO. OF BOB- BINS TO BE SELECTED FOR TESTING OTHER RE- QUIREMENTS IN AMONG- ST THOSE SE- LECTED AS IN Col 3	PERMISSIBLE NO. OF NON- CONFORMING BOBBINS AM- ONGST THOSE SELECTED AS IN Col 5
(1)	(2)	(3)	(4)	(5)	(6)
Up to 3	All	200	4	20	0
4 to 6	4	315	5	30	0
7 to 14	5	500	7	40	1
15 and above	10	800	9	50	2

5.5 The number of bobbins to be tested and the criterion for conformity for each of the characteristics shall be as follows:

<i>Characteristic</i>	<i>No. of Bobbins to be Tested</i>	<i>Criterion for Conformity</i>
Dimensions and con- centricity	According to col 3 of Table 1	Non-conforming bobbins not to exceed the corres- ponding number given in col 4 of Table 1
Workmanship, smooth- ness of surface and freedom from defects	According to col 5 of Table 1	Non-conforming bobbins not to exceed the corres- ponding number given in col 6 of Table 1
Weight	Two sets of specified number of bobbins from each package if the gross sample con- sists of 5 or less packa- ges, or one set of specified number of bobbins from each package if the gross sample consists of more than 5 packages	Each observed value satisfies the requirement



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